6.0 SHAKEDOWN PERIOD PROCEDURES

The MPF has been processing metal items contaminated with Agent GB since January 1997. Thus all systems and startup testing has been performed. Once the approval of this plan is received from the DSHW, shakedown will commence as described in this section. The entire system will be thoroughly tested during the shakedown period to verify that it performs in a safe, consistent, and predictable manner when processing spray tanks.

Shakedown testing will be conducted for 720 hours. Operating conditions will be maintained within the envelope established during the MPF VX ATB. These limits are based on system performance demonstrated by the MPF VX ATB. Operating limits will comply with the requirements of 40 CFR 270.62(a)(1). Proposed operating conditions are preliminary and final values will be confirmed or modified as shakedown progresses.

Hazardous wastes will not be fed to the system at any time unless the conditions discussed above are satisfied. The charging of spray tanks to the incinerator will be stopped if operating conditions deviate from the established limits. The AWFCO system will be in operation at all times during the incineration of hazardous wastes. AWFCO settings during the shakedown period will be the same as those established during the MPF VX ATB. Individual AWFCOs for those parameters that may cause total incinerator shutdown (such as auxiliary fuel, burners, or ID fan) may be bypassed momentarily during routine calibrations.

6.1 STDT SHAKEDOWN

The objectives of the STDT shakedown are as follows:

- Demonstrate that the MPF can safely and efficiently treat spray tanks at the STDT feed rates.
- Familiarize the operators with the differences in operations caused by processing spray tanks.
- Evaluate the propriety of MPF conditions required for permit compliance.
- Establish Discharge Air Lock (DAL) agent monitoring requirements and hold times.
- Establish set points to trigger low temperature monitoring of the spray tanks in the DAL. (i.e. set point for 14-TIT-10)

TOCDF will provide DSHW with two weeks notice before the MPF STDT shakedown begins. Shakedown will require 553 hours of spray tank processing. Additional time may be necessary to ensure operational readiness and establishment of discharge airlock monitoring needs.

The shakedown will involve a series of tests. Individual spray tanks will be processed through the MPF with no additional wastes added before or after the spray tank goes into the MPF. Data from the individual spray tanks will be evaluated before another spray tank is processed. The remainder of the shakedown period will be conducted with two spray tanks in the MPF. The minimum spray tank residence time in the MPF primary chamber will be 67 minutes, consistent with the 5x criteria for spray tanks.

Spray tanks will be monitored while they are in the DAL. A determination of the length of time necessary for successful monitoring of the spray tanks in the DAL will be made during the shakedown period. The first series of tests with ten spray tanks will be done with the DAL timer set at 25 minutes. If a confirmed ACAMS alarm occurs, that tray will be placed back into the MPF for additional time until additional DAL monitoring clears the tray. Then the DAL/furnace cycle time will be increased before testing additional spray tanks. Up to ten spray tanks will be tested at the new conditions.

An additional series of up to ten spray tanks will be processed using high temperature monitoring. A distal end challenge will be made after each spray tank during high temperature ACAMS monitoring. If these challenges are unsuccessful (with no clear special cause of failure), the DAL timer or the MPF cycle time will be increased for the next series. Up to ten more spray tanks will be processed under the new condition. A distal end challenge will be made after each of these spray tanks for high temperature ACAMS monitoring. If these challenges are still unsuccessful (with no clear special cause of failure), TOCDF will continue to iterate until 10 successful high temperature ACAMS distal end challenges are achieved. Once the challenges are successful, additional iterations will occur to establish DAL holding times and optimize the MPF operating conditions and conduct practice performance runs.

TOCDF may request final modifications to the STDT Plan based on data obtained during the shakedown period. Should TOCDF deem changes to the STDT plan necessary, such changes will be coordinated with DSHW.

6.2 POST STDT OPERATION

The STDT was not designed as a demonstration of agent feed rates to the MPF. The STDT was a demonstration that the spray tanks could be processed under normal operating conditions in the MPF with lead emissions that were equal or lower than the lead emission rates used in the HHRA. Therefore, the post STDT operation will be controlled under the conditions established by the MPF VX ATB and any feed restrictions imposed by the review of the MPF VX ATB Report. Operating conditions will be maintained within the limits established by the MPF VX ATB.

Preliminary data consisting of Agent VX DAAMS data, PM emission data, metal emissions data, and MPF operating data will be submitted to DSHW within four weeks of STDT completion. Preliminary results in the past have been shown to be reliable with minor changes that do not impact the final operating limits.

Spray tanks will be limited to one in the MPF at a time until DSHW approves the preliminary data. The operational sequence will feed a new spray tank to the MPF when one exits to the DAL. If the spray tank in the DAL causes an ACAMS alarm, the spray tank will be moved back into Zone 3 and 2 spray tanks will be in the MPF until one can be moved to the DAL. The next new spray tank will not be fed until the MPF is empty.

Once the preliminary data has been approved, normal operations for spray tanks will resume with two spray tanks in the furnace at one time. Agent feed rates will comply with the 75% agent feed limitations imposed by the review of the MPF VX ATB Report. The agent weight per charge under the 75% feed restrictions will be 33.75 lbs./charge. The spray tanks weight per charge is anticipated to be 22 lbs./charge. The hourly agent feed rate under the 75% feed restrictions will be 24.75 lbs./hr. The spray tank hourly agent feed rate after approval of the preliminary data is anticipated to be 24.4 lbs./hr.

Table 6-1 summarizes the proposed feed rate restrictions on the MPF. This request is based on the fact that agent DREs were measured during the MPF VX ATB and the calculated lead emission rates are estimated to be a factor of 75 below the emission rates used for the HHRA. Feeding the spray tanks one at a time limits the potential for lead emissions until the emission rate data is available. Once the preliminary data has shown that the lead emissions are not a threat to human health and the environment, normal operations for spray tanks will still comply with the 75% feed rate restrictions on agent until the MPF VX ATB Report is approved. After approval is received for the MPF VX ATB Report, the VX feed rate will be limited by 100% of the VX feed rate demonstrated during the MPF ATB, and the spray tank feed rate continue to be limited by the spray tank charge rate demonstrated during the STDT and the requirement for less than a 5% agent heel.

TABLE 6-1. PROPOSED FEED RATE RESTRICTIONS

CONDITION	FEED INTERVAL, MINUTES	WEIGHT/CHARGE, LBS./CHARGE	HOURLY FEED RATE, LBS./HR
MPF VX ATB	82	45	33
MPF 50% Rate	82	22.5	16.5
MPF 75% Rate	82	33.75	24.75
STDT, Spray Tanks	54	22	24.4
Post STDT	80	22	16.5
After STDT Preliminary Data Approval	54	22	24.4